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| 09/985,838 | 11/06/2001 | Yoshimi Tomita | 054791-5004 | 4404 |

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MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

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| EXAMINER |
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ORTIZ CRIADO, JORGE L

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| ART UNIT | PAPER NUMBER |
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2655

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/985,838

Applicant(s)

TOMITA, YOSHIMI

Examiner

Jorge L Ortiz-Criado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,6,8,10,12 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7 and 9 is/are rejected.
- 7) ☒ Claim(s) 11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species II, Figs. 6 and 7, claims 1,3,5,7,9,11 and 13 in the reply filed on 06/01/2004 is acknowledged.
2. Claims 2,4,6,8,10,12 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/01/2004.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,3,5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka. U.S. Patent No. 5,553,044 in combination with Kawamura et al. U.S. Patent No. 6,424,614 and Satoh et al. U.S. patent no. 5,428,597.

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Regarding claim 1, Tanaka discloses a multi-layered disc (See Abstract) comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane (See col. 4, lines 18-67; col. Figs. 2,3),

Tanaka does not disclose that the control data being recorded by a CAV (Constant Angular Velocity) method over a plurality of tracks in said control data recording area, and said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line.

However this feature is well known in the art as evidenced by Kawamura et al and Satoh et al.

Kawamura et al. discloses a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane and being recorded by a CAV (Constant Angular Velocity) or CLV (Constant Linear Velocity) method over a plurality of tracks in said control data recording area (See col. 4, lines 25-65; Figs. 3-4)

Satoh et al. discloses multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of

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which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane, and said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line (See col. 4, line 66 to col. 5, line 11, Figs. 6 and 7; col. 6, lines 6-36, Figs. 10)

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to record the control data in each of said recording layers such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line in order to prevent the recording/reproducing light beam not to be focused on two or more control data recording areas simultaneously to avoid cross-talks and the desired control information of the desired layer can be accurately detected, as suggested by Satoh et al.; and by a recording method of CAV obtaining a simplicity recording/reproduction, as suggested by Kawamura et al.

Regarding claim 3, the combination of Tanaka with Kawamura et al. and Satoh et al. shows wherein the control data are recorded as a PEP (Phase Encoded Part) signal (See Tanaka col. 4, lines 18-67; col. Figs. 2,3)

Regarding claim 5, the combination of Tanaka with Kawamura et al. and Satoh et al. shows comprising a second control data recording area for recording a second control data to

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control the operation of recording and/or reproducing the information data in said recording layers (See Tanaka col. 4, lines 18-67; col. Figs. 2,3; SFP)

Regarding claim 7, Tanaka discloses a multi-layered disc reproducing apparatus for reproducing information data recorded on a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording the information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane (See col. 4, lines 18-67; col.; col. 9, lines 28-49; Figs. 2,3,4), said multi-layered disc reproducing apparatus comprising:

a detection signal outputting device for outputting a detection signal, which carries the control data in said control data record area, on the basis of a reflected light obtained by an irradiation of a reading light onto said control data recording area (See col. 28-49; Fig. 4, ref# 17,18);

a control data reproducing device for reproducing the control data on the basis of the detection signal outputted from said detection signal outputting device; and an information data reproduction controlling device for reproducing the information data recorded in said information data recording area on the basis of the reproduced control data (See col. 28-49; Fig. 4, ref# 10)

Tanaka does not disclose that the control data being recorded by a CAV method over a plurality of tracks in said control data recording area, said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said

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recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line.

However this feature is well known in the art as evidenced by Kawamura et al and Satoh et al.

Kawamura et al. discloses a multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane and being recorded by a CAV (Constant Angular Velocity) or CLV (Constant Linear Velocity) method over a plurality of tracks in said control data recording area (See col. 4, lines 25-65; Figs. 3-4)

Satoh et al. discloses multi-layered disc comprising a plurality of recording layers laminated with each other in a direction of a normal line of said recording layers, in each of which an information data recording area for recording information data and a control data recording area for recording control data to control an operation of recording and/or reproducing the information data are disposed on a same plane, and said control data recording area in each of said recording layers being disposed such that said control data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line (See col. 4, line 66 to col. 5, line 11, Figs. 6 and 7; col. 6, lines 6-36, Figs. 10)

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to record the control data in each of said recording layers such that said control

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data recording area of one of said recording layers is not superimposed with said control data recording area of another of said recording layers in the direction of the normal line in order to prevent the recording/reproducing light beam not to be focused on two or more control data recording areas simultaneously to avoid cross-talks and the desired control information of the desired layer can be accurately detected, as suggested by Satoh et al.; and by a recording method of CAV obtaining a simplicity recording/reproduction, as suggested by Kawamura et al.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka. U.S. Patent No. 5,553,044 in combination with Kawamura et al. U.S. Patent No. 6,424,614 and Satoh et al. U.S. patent no. 5,428,597 and further in view of Yamaguchi et al.

The combination of Tanaka with Kawamura et al. and Satoh et al. discloses all the limitations based on claim 7, as outlined above. The combination shows extracting a control data signal based on the control data from the detection signal and a control data decoder for generating the control data by the control data signal extracted by said. (See Tanaka col. 28-49; Fig. 4, ref# 10)

But, the combination does not show a low pass filter for extracting a control data signal.

However this feature is well known in the art as evidenced by Yamaguchi et al., which discloses a recording/reproducing apparatus including a decoder for extracting the data signal from the detection signal and a low pass filter.

Therefore it would, have been obvious to one with ordinary skill in the art at the time of the invention to include a low pass filter for extracting a control data signal based on the control data from the detection signal in order to remove noise components included on the reproduced signal to be decoded, as suggested by Yamaguchi et al.

Allowable Subject Matter

6. Claims 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record in combination as outlined above teaches the control data reproducing apparatus comprising a low pass filter for extracting a control data signal based on the control data from the detection signal; and a control data decoder for generating the control data by the control data signal extracted by said low pass filter, but the prior art of record fails to teach or suggest either alone or in combination, specifically wherein said low pass filter has a cut-off frequency, which is a double frequency of a repetition frequency of a longest pit carrying the control data, and an attenuation characteristic, which attenuates the detection signal from a standard level of said low pass filter by the cut-off frequency, as in claimed in claim 11; and wherein said low pass filter has an attenuation characteristic which attenuates more than 40 dB from a standard level of said low pass filter at a repetition frequency of a SFP (Standard

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Formatted Part) signal having a longest pit, as claimed in claim 13, if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm), Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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W. R. YOUNG
PRIMARY EXAMINER